

A New Species of *Anemia* from South America

JOHN T. MICKEL¹

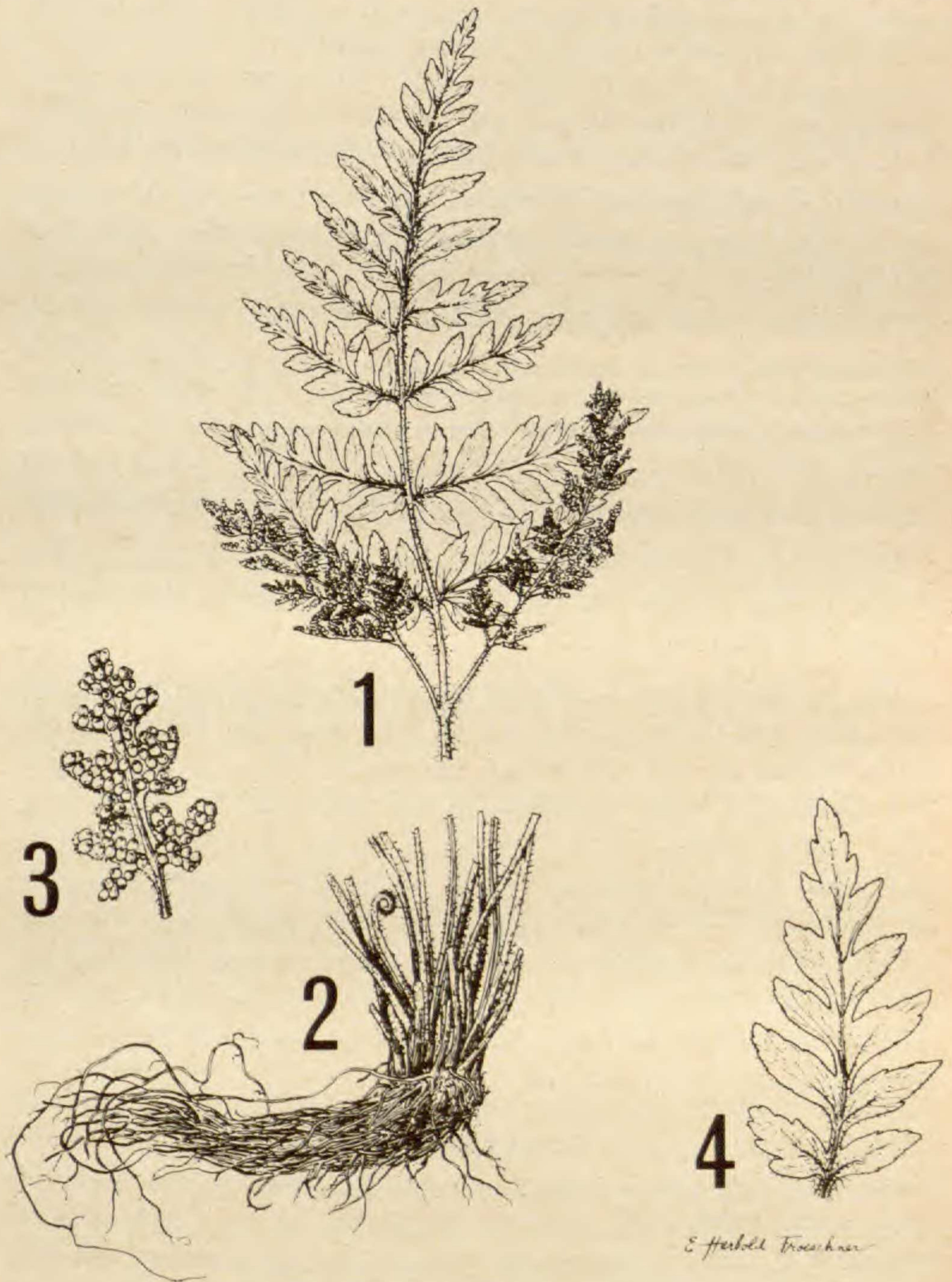
During the preparation of a monograph of *Anemia* subgenus *Coptophyllum*, a series of specimens from western South America and Panama was seen which was strikingly different from the species of *Anemia* familiar to me. Some of the specimens were noted as possibly belonging to a new species. The plants resemble *A. flexuosa*, also of western South America, in their dissection, oblique rhizomes, and hirsute stipes, and some specimens were labelled with this name. However, on closer examination, they were found to be quite distinct, being of smaller size, and possessing rather lax, short-petiolate fertile pinnae and floating stomates. These last characters tie it closely to *Anemia brandegeea* and *A. intermedia* of Mexico. The specimens closely matched the description and drawing of *A. smithii* Brade (1929) of western Brazil. Since I was unable to borrow the type of that species at the time, I tentatively placed these specimens under that name in my revision (Mickel, 1962). It was grouped with *A. brandegeea* and *A. intermedia* in a new section *Adetostoma*. Subsequently, however, I have obtained photographs of the isotype of *A. smithii* from the British Museum (Natural History), which shows that there is no question but that *A. smithii* is actually only a small specimen of *A. tomentosa* and not the same as the plants from the Andean regions. These plants thus represent an undescribed species.

ANEMIA clinata Mickel, sp. nov.

Plate 4

Rhizomatibus apice ascendentibus atque petiolorum basibus vestitis; pilis aurantiacis; petiolo tereti, 2–15 cm longo, minus quam 1 mm lato, brunneo vel atrobrunneo, hirsuto; lamina deltoideo-elongata, bipinnata, chartacea, 4–13 cm longa; pinnis 5–11-jugis; pinnulis oblongis, late adnatis, integris vel crenatis, pilosis; stomatibus liberis; pinnis fertilibus brevipetiolatis, suberectis, remotis a pinnis sterilibus, brevioribus quam lamina

¹The work on this paper was partially supported by a grant from the National Science Foundation (NSF-GB-1230).



ANEMIA CLINATA MICKEL, SP. NOV. FIG. 1. BLADE, $\times 0.9$. FIG. 2. RHIZOME, $\times 0.9$. FIG. 3. FERTILE PINNA, $\times 1.3$. FIG. 4. STERILE PINNA, $\times 1.3$.
TYPE SPECIMEN (US)

sterili; sporis 81–87 μ longis, tetraedro-globosis, angulorum umbonibus conspicuis, laesuris levibus, solidis.

Type specimen: PERU. Dept. Junín: Along Río Perene, near "Hacienda 3," Colonia Perene, alt. ca. 600 m, June 16–18, 1929, *E. P. Killip* and *A. C. Smith* 25194 (US; isotypes F, NY).

ADDITIONAL SPECIMENS EXAMINED:

PANAMA. CHIRIQUÍ: Trail from San Felix to Cerro Flor, *Allen* 1925 (GH, MO, US).

COLOMBIA: META: Río Duda, *Fosberg* 19475 (US).

PERU. JUNÍN: East of Quimiri Bridge, near La Merced, *Killip & Smith* 23951 (NY); Colonia Perene, *Killip & Smith* 25036 (NY, US); Chanchamayo Valley, *Schunke* 78 (F, US); Schunke Hacienda, above San Ramón, *Schunke* A137 (US).

BOLIVA. LA PAZ: Pata, *Williams* 2584 (GH, NY, US), 2586 (NY, US).

The species derives its name from the slanting or lax position of the fertile pinnae (L., sloping) in contrast to the vertical position in most *Anemias*.

The South American specimens are fairly uniform, though they vary somewhat in size (8–28 cm) and the segments are more distant in the Colombian specimens than in the others. The specimens from Panama appear different in their very short fertile pinnae (1–2.5 cm long), more rounded segments, and ovate blades. Whether these plants are merely immature or represent yet another species is not known, but for the present they are placed in *Anemia clinata*. These Panamanian plants were indicated by Maxon as a new species, but I did not take up his herbarium name for the species since his plants were the most atypical of those seen.

LITERATURE CITED

- BRADY, A. C. 1929. Filices novae Brasilianae. Bol. Mus. Nac. Rio Janeiro **5** (3): 93–96.
- MICKEL, J. T. 1962. A monographic study of the fern genus *Anemia*, subgenus *Coptophyllum*. Iowa State J. Sci. **36**(4): 349–482.

DEPARTMENT OF BOTANY AND PLANT PATHOLOGY, IOWA STATE UNIVERSITY, AMES, IOWA 50010.